REMARKS

Claims 1-15, all the claims pending in the application, stand rejected on prior art grounds. Applicant has canceled claims 16-20 without prejudice or disclaimer, and incorporated these features in the independent claims. Applicants respectfully traverse these rejections based on the following discussion.

I. The Prior Art Rejections

Claims 1-3 and 5-13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Drapkin, et al. (U.S. Patent No.6,553,445), hereinafter Drapkin, in view of Asano, et al. (U.S. Patent No. 5,781,742, hereinafter referred to as "Asano." Claims 4 and 14-20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Drapkin, in view of Asano, in further view of Takashima (U.S. Patent No. 5,931,927). Applicants respectfully traverse these rejections based on the following discussion.

A. The Rejection Based on Drapkin in View of Asano

Regarding independent claims 1, 5, and 11-13, and related dependent claims 2, 3 and 6-10, first, the references, separately, or in combination, fail to disclose, teach or suggest a reason or motivation for being combined.

Second, even assuming that the references would have been legally combinable, neither Drapkin nor Asano disclose, teach or suggest the features of independent claim 1, and similarly independent claims 5 and 11, which incorporate the features of dependent claims 18-20, including a statistics analyzer connected to receive an output from the counting circuit, in which

the statistics analyzer is adapted to determine whether any of: neither data of each group is inverted, data of a first group is inverted while data of a second group is not inverted, data of the second group is inverted while data of the first group is not inverted, and data of each group is inverted, the statistics analyzer includes a control range checking unit. Similarly, neither Drapkin nor Asano disclose, teach or suggest the features of independent claim 12, and similarly independent claim 13, which incorporate the features of dependent claims 16 and 17, including deciding through a statistics analyzer, which receives an output from a counting circuit, determines whether any of: neither data of each group is inverted, data of a first group is inverted while data of a second group is not inverted, data of the second group is inverted while data of the first group is not inverted, and data of each group is inverted, the statistics analyzer includes a control range checking unit. (See Page 9, line 29-Page 11, line 18; Page 13, line 7-Page 14, line 2; and Figures 2-4).

Indeed, the Examiner admits that neither Drapkin nor Asano "expressly disclose a statistics analyzer connected to the counting circuit, where the statistics analyzer is adapted to determine whether any of: neither data of each group is inverted, data of a first group is inverted while data of a second group is not inverted, data of the second group is inverted while data of the first group is not inverted, and data of each group is inverted," let alone, the statistics analyzer includes a control range checking unit. Accordingly, Drapkin and Asano are deficient in not disclosing Applicant's claimed invention. (See Office Action, Page 6, 3rd Paragraph).

Please note, Applicant also agrees with the Examiner that Drapkin also "does not expressly disclose a display device connected to the receiving block." (See Office Action, Page 4, 3rd Paragraph).

For at least the reasons outlined above, Applicant respectfully submits that neither Drapkin nor Asano, alone or in combination, disclose, teach or suggest, the claimed features as recited above in independent claim 1, and similarly independent claims 5 and 11-13, of Applicant's invention.

For the reasons stated above, the claimed invention, and the invention as cited in independent claims 1, 5 and 11-13, and related dependent claims 2, 3 and 6-10, is fully patentable over the cited references.

B. The Rejection Based on Drapkin in View of Asano, and further in view of Takashima

First, at least three (3) references have been "combined" together in an attempt to disclose Applicant's claimed invention.

Regarding independent claim 4, and similarly, independent claim 13, and dependent claims 14 and 15, first, the references, separately, or in combination, fail to disclose, teach or suggest a reason or motivation for being combined. Please note, the features of dependent claims 16-20 have been incorporated into independent claims 1, 5 and 11-13, as discussed above.

Second, even assuming that the references would have been legally combinable, neither Drapkin nor Asano disclose, teach or suggest the features of independent claim 4, including a statistics analyzer connected to receive an output from the counting circuit, in which the statistics analyzer is adapted to determine whether any of: neither data of each group is inverted, data of a first group is inverted while data of a second group is not inverted, data of the second group is inverted while data of the first group is not inverted, and data of each group is inverted,

the statistics analyzer includes a control range checking unit. Similarly, neither Drapkin nor Asano disclose, teach or suggest the features of independent claim 13, including determining through a statistics analyzer whether any of: neither data of each group is inverted, data of a first group is inverted while data of a second group is not inverted, data of the second group is inverted while data of the first group is not inverted, and data of each group is inverted, the statistics analyzer includes a control range checking unit. (See Above).

Indeed, the Examiner admits that neither Drapkin nor Asano, as discussed, expressly disclose the above claimed feature of Applicant's invention, let alone, the statistics analyzer includes a control range checking unit, and thus Drapkin and Asano are deficient in not disclosing Applicant's claimed invention. (See Office Action, Page 6, 3rd Paragraph).

Takashima is also deficient.

In contrast, Figure 3 of Takashima merely discloses an output device including a chip with two circuits A where each of the circuits A is "considered to be a comparator." Contrary to the assertion in the Office Action, the comparator , which "makes a comparison between the number of 1s and the number of 0s, is not the structural, as well as functional, equivalent to Applicant's statistics analyzer. Indeed, the comparator is disclosed as a generic block diagram box identified as circuit A without identifying any of the specific internal components of circuit A, which apparently performs this comparison function. Further, the comparator only performs a comparison function without determining whether data should be inverted for each of the data groups A and B, including a determination whether the data is in the control range R (as discussed below), for example, as performed by the statistics analyzer of Applicant's invention. Accordingly, Takashima does not disclose or suggest any statistics analyzer, let alone, a statistics analyzer, which includes a control range checking unit as claimed by Applicant. Thus,

Takashina does not teach or suggest including a statistics analyzer connected to receive an output from the counting circuit, in which the statistics analyzer is adapted to determine whether any of: neither data of each group is inverted, data of a first group is inverted while data of a second group is not inverted, data of the second group is inverted while data of the first group is not inverted, and data of each group is inverted, the statistics analyzer includes a control range checking unit. (See above; Takashina at Abstract; Column 8, lines 45-column 10, line 30; and Figure 3).

In comparison, Applicant's invention includes a statistics analyzer 32 where the statistics analyzer includes a control range checking unit. As shown in Figures 3 and 4, the control range checking unit is set at a predetermined range R and determines "whether each of the numbers of data to be changed for the groups A and B (Count AIIA and Count AIIB) is in the control range R." However, as indicated above, Takashima only generally discloses a comparator for making a comparison between 1s and 0s, whereas Applicant discloses a statistics analyzer, including a control checking unit for checking a predetermined control range R. Accordingly, the claimed invention is able to achieve a greater reduction in the EMI associated with the data transfer than the noise/interface reduction in the conventional Takashima invention.

Therefore, Takashima, as indicated above, only teaches a comparator not a statistics analyzer, which includes a control range checking unit. Thus, Applicant traverses the assertion that Takashima teaches Applicant's invention.

For at least the reasons outlined above, Applicant respectfully submits that none of Drapkin, Asano or Takashima, alone or in combination, disclose, teach or suggest, including a statistics analyzer connected to receive an output from the counting circuit, in which the statistics analyzer is adapted to determine whether any of: neither data of each group is inverted,

data of a first group is inverted while data of a second group is not inverted, data of the second group is inverted while data of the first group is not inverted, and data of each group is inverted, the statistics analyzer includes a control range checking as recited in independent claim 4 of Applicant's invention. Similarly, none of Drapkin, Asano or Takashima, alone or in combination, disclose. teach or suggest, including determining through a statistics analyzer whether any of: neither data of each group is inverted, data of a first group is inverted while data of a second group is not inverted, data of the second group is inverted while data of the first group is not inverted, and data of each group is inverted, the statistics analyzer includes a control range checking unit

For the reasons stated above, the claimed invention, and the invention as cited in independent claim 4, and similarly independent claim 13, and related dependent claims 14 and 15, is fully patentable over the cited references.

II. Formal Matters and Conclusion

In view of the foregoing, Applicants submit that claims 1-15, all the claims presently pending in the application, are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary.

Please charge any deficiencies and credit any overpayments to Attorney's Deposit Account Number 50-0510.

Respectfully submitted,

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